

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A system for synchronizing data streams, the system comprising:
 - a) an input source for a CLK and a SYNC stream;
 - b) a SYNC decoder for receiving said CLK and SYNC streams and decoding [[said]] SYNC stream packets from said SYNC stream into [[a]] qualified system time events, where each qualified system time event has been temporally qualified by the SYNC decoder using a checkword contained in a SYNC stream packet;
 - c) a plurality of SYNC receivers, for receiving said qualified system time events and converting said qualified system time events to one or more derived time events; and
 - d) an output interface for transmitting said derived time events.
2. (Original) The system of claim 1 wherein said input source comprises one or more master locks.
3. (Previously Presented) The system of claim 1 wherein said input source comprises a locked oscillator that outputs said CLK stream to said SYNC decoder, wherein the locked oscillator maintains a CLK stream even when a source of a CLK stream is removed.
4. (Previously Presented) The system of claim 1 wherein said input source receives said CLK stream from an external master reference and outputs said CLK stream to said SYNC decoder.
5. (Previously Presented) The system of claim 1 wherein each of said SYNC receivers comprises a flywheeling counter, wherein the derived time events are dependent on the value of each flywheeling counter.

6. (Original) The system of claim 1 wherein said SYNC stream comprises a plurality of packets, each packet comprising: a high level logic bit, a packet start bit, a group of flag bits, a low bit, a group of checkword bits; and a take bit.

7. (Previously Presented) The system of claim 6, wherein the flag bits, low bit and checkword bits repeat within each packet.

8. (Currently Amended) A method for synchronizing data streams comprising the steps of:

- a) receiving a CLK signal;
- b) receiving a SYNC stream;
- c) decoding said SYNC stream into a plurality of qualified system time events, where each qualified system time event has been temporally qualified by a SYNC decoder using a checkword contained in a SYNC stream packet, said decoding utilizing said CLK signal;
- d) transmitting each of said plurality of qualified system time events to one or more receivers;
- e) creating and synchronizing derived time events ~~contained in~~ using said qualified system time events ~~packets~~ within said receivers; and
- f) transmitting said derived time events.

9. (Currently Amended) A method for synchronizing data streams, said method comprising:

- a) receiving a CLK stream and a SYNC stream;
- b) decoding said SYNC stream into qualified system time events, where each qualified system time event has been temporally qualified by a SYNC decoder using a checkword contained in a SYNC stream packet;
- c) transmitting said qualified system time events to a plurality of SYNC receivers,

d) converting of said qualified system time events by said SYNC receivers to one or more derived time events; and

e) transmitting said derived time events to one or more components.

10. (Original) The method of claim 9 wherein said CLK stream is received from one or more master locks.

11. (Original) The method of claim 10 wherein said one or more master locks receive said CLK stream from an external master reference.

12. (Original) The method of claim 9 wherein said CLK stream is received from a locked oscillator.

13. (Original) The method of claim 9 wherein said converting of said SYNC packets utilizes at least one flywheeling counter.

14-16. (Canceled)

17. (Currently Amended) A system for synchronizing data streams, comprising:

means for receiving a CLK signal;

means for receiving a SYNC stream;

means for decoding said SYNC stream into a plurality of qualified system time events, where each qualified system time event has been temporally qualified by the means for decoding using a checkword contained in a SYNC stream packet, said decoding utilizing said CLK signal;

means for transmitting each of said plurality of qualified system time events to one or more receivers;

means for creating and synchronizing derived time events ~~contained in~~ using said qualified system time events ~~packets~~ within said receivers; and

means for transmitting said derived time events.

18. (Currently Amended) A system for synchronizing data streams, the system comprising:

- a) an input source for a clock and a synchronization stream;
- b) a synchronization decoder for receiving said clock and synchronization streams and decoding synchronization stream packets in said synchronization streams into qualified system time events, where each qualified system time event has been temporally qualified by the synchronization decoder using a checkword contained in a synchronization stream packet;
- c) a plurality of synchronization receivers, for receiving said qualified system time events and converting said qualified system time events to one or more derived time events; and
- d) an output interface for transmitting said derived time events.

19. (Previously Presented) The system of claim 18 wherein a periodicity of the derived time events has a an integer or a complex relationship to the qualified system time events.

20. (Previously Presented) The system of claim 18 wherein the derived time events of each synchronization receiver are dependent on a value of a counter included in the receiver.

21. (Previously Presented) The system of claim 18 wherein said input source comprises one or more master locks.

22. (Previously Presented) The system of claim 18 wherein said input source comprises a locked oscillator that outputs said CLK stream to said SYNC decoder, wherein the locked oscillator maintains a CLK stream even when a source of a CLK stream is removed.

23. (Previously Presented) The system of claim 18 wherein each of said SYNC receivers comprises a flywheeling counter, wherein the derived time events are dependent on the value of each flywheeling counter.